specification and claims, the use of the word "optimal" may mean a value or combination or selection that is determined through the use of an algorithm as the best result found by the algorithm. Since optimization may be a complex process, the optimal result may not be the absolute best result but may be a localized best result. Clusters of stores are then formed based on the closeness of the optimal combinations for each store (step 1012). New cluster based combinations are then provided (step 1016).

Also, at page 4, starting from line 17, please substitute the following paragraph for the deleted paragraph:

To facilitate understanding, FIG. 10 is a broad flow chart of an embodiment of the invention. The steps of FIG. 10 start at step 1000 as shown. Store specific information is collected (step 1004). Such store specific information may be individual store point-of-sales data, cost data, or customer survey data. The store specific information is used and processed to provide optimal combinations fore each individual store (step 1008). In the specification and claims, the use of the word "optimal" may mean a value or combination or selection that is determined through the use of an algorithm as the best result found by the algorithm. Since optimization may be a complex process, the optimal result may not be the absolute best result but may be a localized best result. Clusters of stores are then formed

based on the closeness of the optimal combinations for each store (step 1012). New cluster based combinations are then provided (step 1016). The steps of FIG. 10 stop at step 1020.

At page 5, starting from line 9, please delete the following paragraph

To facilitate discussion, FIG. 1 is a flow chart of a process intelligently clustering stores, which is an example of an embodiment of the invention. In this example store specific point-of-sales and cost data has already been collected. First, an optimization is performed using the point-of-sales and cost data (step 104). Preferably, the same optimization is performed for all stores. FIG. 2 is a schematic view of a price optimizing system 200, which may be used to provide a price optimization. The price optimizing system 200 comprises an econometric engine 204, a financial model engine 208, an optimization engine 212, and a support tool 216. The econometric engine 204 is connected to the optimization engine 212, so that the output of the econometric engine 204 is an input of the optimization engine 212. The financial model engine 208 is connected to the optimization engine 212, so that the output of the financial model engine 208 is an input of the optimization engine 212. The optimization engine 212 is connected to the support tool 216 so that output of the

optimization engine 212 is provided as input to the support

tool 216 and output from the support tool 216 may be

provided as input to the optimization engine 212. The

econometric engine 204 may also exchange data with the

financial model engine 208.

Also, at page 5, starting from line 9, please substitute the following paragraph for the deleted paragraph:

To facilitate discussion, FIG. 1 is a flow chart of a

process intelligently clustering stores, which is an example

of an embodiment of the invention. In this example store

specific point-of-sales and cost data has already been

collected. The steps of FIG. 1 start at step 100 as shown.

First, an optimization is performed using the point-of-sales

and cost data (step 104). Preferably, the same optimization

is performed for all stores. FIG. 2 is a schematic view of a

price optimizing system 200, which may be used to provide

a price optimization. The price optimizing system 200

comprises an econometric engine 204, a financial model

engine 208, an optimization engine 212, and a support tool

216. The econometric engine 204 is connected to the

optimization engine 212, so that the output of the

econometric engine 204 is an input of the optimization

engine 212. The financial model engine 208 is connected

to the optimization engine 212, so that the output of the

financial model engine 208 is an input of the optimization

engine 212. The optimization engine 212 is connected to

the support tool 216 so that output of the optimization

engine 212 is provided as input to the support tool 216 and

output from the support tool 216 may be provided as input

to the optimization engine 212. The econometric engine

204 may also exchange data with the financial model

engine 208.

At page 6, starting from line 5, please delete the following paragraph

FIG. 3 is a more detailed flow chart of a preferred

embodiment of a process that utilizes the price optimizing

system 200 to optimize prices to perform an optimization

(step 104). Data 220 is provided from the store computer

systems 224 to the econometric engine 204 (step 304).

Generally, the data 220 provided to the econometric engine

204 may be point-of-sale information, product information,

and store information. The econometric engine 204

processes the data 220 to provide demand coefficients 228

(step 308) for a set of algebraic equations that may be used

to estimate demand (volume sold) given certain marketing

conditions (i.e., a particular store in the chain), including a

price point. The demand coefficients 228 are provided to

the optimization engine 212 (step 312). Additional

processed data from the econometric engine 204 may also

be provided to the optimization engine 212.

Also, at page 6, starting from line 5, please substitute the following paragraph for the deleted paragraph:

FIG. 3 is a more detailed flow chart of a preferred embodiment of a process that utilizes the price optimizing system 200 to optimize prices to perform an optimization (step 104). The steps of FIG. 3 start at step 300. Data 220 is provided from the store computer systems 224 to the econometric engine 204 (step 304). Generally, the data 220 provided to the econometric engine 204 may be point-of-sale information, product information, and store information. The econometric engine 204 processes the data 220 to provide demand coefficients 228 (step 308) for a set of algebraic equations that may be used to estimate demand (volume sold) given certain marketing conditions (i.e., a particular store in the chain), including a price point. The demand coefficients 228 are provided to the optimization engine 212 (step 312). Additional processed data from the econometric engine 204 may also be provided to the optimization engine 212.

At page 8, starting from line 9, please delete the following paragraph

FIG. 4 is a more detailed flow chart of a preferred embodiment of step 108 for creating clusters (groups) based on the closeness of the optimized product and price combinations for each store. Constraints may be provided

(step 404). Examples of such constraints are prohibiting certain stores from being within the same cluster, forcing certain stores to be in the same cluster, setting a maximum number of clusters, and setting a minimum cluster size. The forcing certain stores to be in the same cluster may be used to place geographically close stores in the same cluster or to place stores with similar traits, such as being in a downtown area or near a freeway exit, in the same cluster.

Also, at page 8, starting from line 9, please substitute the following paragraph for the deleted paragraph:

FIG. 4 is a more detailed flow chart of a preferred embodiment of step 108 for creating clusters (groups) based on the closeness of the optimized product and price combinations for each store. The steps of FIG. 4 start at step 400 as shown. Constraints may be provided (step 404). Examples of such constraints are prohibiting certain stores from being within the same cluster, forcing certain stores to be in the same cluster, setting a maximum number of clusters, and setting a minimum cluster size. The forcing certain stores to be in the same cluster may be used to place geographically close stores in the same cluster or to place stores with similar traits, such as being in a downtown area or near a freeway exit, in the same cluster.

At page 8, starting from line 19, please delete the following paragraph

Stores with the closest prices and which meet the constraints are then grouped together in clusters (step 408). There may be many different approaches to clustering stores with the closest prices. Such clustering may attempt to minimize the sum of differences or distances in prices between stores in a cluster.

Also, at page 8, starting from line 19, please substitute the following paragraph for the deleted paragraph:

Stores with the closest prices and which meet the constraints are then grouped together in clusters (step 408). There may be many different approaches to clustering stores with the closest prices. Such clustering may attempt to minimize the sum of differences or distances in prices between stores in a cluster. The steps of FIG. 4 stop at step 412.

At page 11, starting from line 17, please delete the following paragraph

After the clusters are created (step 108), prices for items in the store are set by cluster so that stores within the same clusters have items with the same prices (step 112). Setting the product and price combinations by cluster is an example of providing cluster based combinations (step 1016). Preferably, the new prices may be obtained by performing a new optimization, where prices are calculated

by cluster instead of by store. Such an optimization might

be weighted by volume of sales for each store. Table 4 is

an example of such an optimization by cluster.

Also, at page 11, starting from line 17, please substitute the following paragraph for the deleted paragraph:

After the clusters are created (step 108), prices for

items in the store are set by cluster so that stores within the

same clusters have items with the same prices (step 112).

Setting the product and price combinations by cluster is an

example of providing cluster based combinations (step

1016). Preferably, the new prices may be obtained by

performing a new optimization, where prices are calculated

by cluster instead of by store. Such an optimization might

be weighted by volume of sales for each store. The steps of

FIG. 1 stop at step 116. Table 4 is an example of such an

optimization by cluster.

At page 13, starting from line 11, please delete the following paragraph

In another embodiment of the invention, it may be

found that for some product categories there may be more

products available than what may be offered in each store.

For example, there may be more than 500 different soap

products, although the stores may only have room to sale

200 products. An optimization engine as described above

may be used to determine the most profitable combination

of products for each store. A chain of 100 stores may have a hundred product combinations. It may be desirable to provide five clusters of product combinations. This embodiment of the invention would provide clusters of stores according to product combinations (assortment zones) for an entire store or a product category. FIG. 6 is a flow chart on a broader embodiment of the invention. Store specific point-of-sales or survey data may be collected. Using the above example of soap products, an optimization may be performed using the store specific data to determine a combination of 200 products of the 500 soap products that would optimize sales on a store by store bases for each of the 100 stores (step 604). The stores are then clustered into five clusters so that each cluster that a store is placed has the most similar combination of products (step 608). Stores are then provided an assortment of products (product combinations) according to the cluster that the store is in (step 612). As mentioned before, such clustering would have lower sales and/or profit than providing individual product combinations for each individual store, but would be designed to maximize sales and/or revenue for different combinations of five clusters. In one embodiment, the prices are set or optimized on a store by store basis. In another embodiment, an optimization may be done where stores in the same assortment zone form

price clusters. Stores may be placed in an assortment cluster so that all stores in the same assortment cluster receive the same assortment and also in a price cluster so that all stores in the same price cluster have the same prices.

Also, at page 13, starting from line 11, please substitute the following paragraph for the deleted paragraph:

a7

In another embodiment of the invention, it may be found that for some product categories there may be more products available than what may be offered in each store. For example, there may be more than 500 different soap products, although the stores may only have room to sale 200 products. An optimization engine as described above may be used to determine the most profitable combination of products for each store. A chain of 100 stores may have a hundred product combinations. It may be desirable to provide five clusters of product combinations. This embodiment of the invention would provide clusters of stores according to product combinations (assortment zones) for an entire store or a product category. FIG. 6 is a flow chart on a broader embodiment of the invention. The steps of FIG. 6 start at step 600 as shown. Store specific point-of-sales or survey data may be collected. Using the above example of soap products, an optimization may be performed using the store specific data to determine a

combination of 200 products of the 500 soap products that would optimize sales on a store by store basis for each of the 100 stores (step 604). The stores are then clustered into five clusters so that each cluster that a store is placed has the most similar combination of products (step 608). Stores are then provided an assortment of products (product combinations) according to the cluster that the store is in (step 612). The steps of FIG. 6 stop at step 616. As mentioned before, such clustering would have lower sales and/or profit than providing individual product combinations for each individual store, but would be designed to maximize sales and/or revenue for different combinations of five clusters. In one embodiment, the prices are set or optimized on a store by store basis. In another embodiment, an optimization may be done where stores in the same assortment zone form price clusters. Stores may be placed in an assortment cluster so that all stores in the same assortment cluster receive the same assortment and also in a price cluster so that all stores in the same price cluster have the same prices.

At page 14, starting from line 16, please delete the following paragraph

FIG. 9 is a flow chart of another embodiment of the invention. In this example store specific information may be collected by a survey (step 954). The survey data is

used to provide a store by store promotion combination optimization (step 958). In one example, 200 products may discussed in the survey. A promotion combination may be a combination of 20 of the 200 products at different discounts and displays. It may be found that each store of 100 stores in a chain has a different promotion combination optimization. Promotion clusters are created to cluster the stores according to how close their promotion combinations are (step 962). Promotion combinations for each store are then determined by the cluster that the store is in (step 966)

Also, at page 14, starting from line 16, please substitute the following paragraph for the deleted paragraph:

a8

FIG. 9 is a flow chart of another embodiment of the invention. The steps of FIG. 9 start at step 950 as shown. In this example store specific information may be collected by a survey (step 954). The survey data is used to provide a store by store promotion combination optimization (step 958). In one example, 200 products may be discussed in the survey. A promotion combination may be a combination of 20 of the 200 products at different discounts and displays. It may be found that each store of 100 stores in a chain has a different promotion combination optimization. Promotion clusters are created to cluster the stores according to how close their promotion combinations are (step 962). Promotion combinations for each store are